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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,152	06/27/2003	Cheol-Hee Moon	6161.0064.AA	5184

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EXAMINER

PERRY, ANTHONY T

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/607,152	Applicant(s) MOON, CHEOL-HEE	
	Examiner Anthony T. Perry	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/14/06 has been entered.

Claims 14-16 have been cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1, 2, and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whang et al. (US 6,373,195) in view of Nakamura (US 5,990,630) further in view of Horiuchi et al. (US 6,043,604).

Regarding claims 1, 7, 8, and 11, Whang discloses a plasma display panel, comprising: a first substrate and a second substrate that are substantially parallel and have a predetermined gap there between; a plurality of address electrodes (A1-A9) formed on a surface of the first substrate opposing the second substrate; the address electrodes (A1-A9) being provided in a line pattern and being substantially parallel with each other; a dielectric layer formed over a surface of the first substrate covering the address electrodes (A1-A9); barrier ribs formed on the

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dielectric layer in a lattice pattern, the barrier ribs defining discharge cells (see for example Fig. 12 and the abstract); a plurality of discharge sustain electrodes (32+33) formed on a surface of the second substrate which opposes the first substrate (13), the discharge sustain electrodes (32) being formed in a line pattern in a direction substantially perpendicular to the address electrodes (see for example Fig. 13), wherein the barrier ribs include first barrier rib members formed along a same direction as the address electrodes (A1-A9) (Fig. 12), and second barrier rib members formed along a same direction as the discharge sustain electrodes (32+33) within a space between two neighboring first barrier members, the barrier rib members defining the discharge cells to be arranged in a zigzag manner along a same direction as the address electrodes.

Whang does not specifically state that a transparent dielectric layer and a protection layer formed over the surface of the second substrate covering the discharge sustain electrodes. However, such an arrangement is conventional in the art. Nakamura teaches a dielectric layer formed over the discharge sustain electrodes and protective layer formed over the dielectric layer to protect it from the discharge (see for example col. 1, line 58 –col. 2, line 3). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a dielectric layer over the sustain discharge electrodes to insulate them from one another and a protective layer over the dielectric layer to protect it from the discharge.

Whang and Nakamura do not specifically teach the entire structure of the barrier ribs including a light-absorbing material. However, Horiuchi et al. teach the barrier ribs being colored black to improve the contrast (see for example, col. 8, lines 36-46). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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make the barrier ribs black in color so as to improve the contrast and the overall quality of the display.

Regarding claim 2, Horiuchi et al. teach the use of copper oxide as the black pigment used in making the light absorbing barrier ribs (see col. 12, lines 39-41). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use chromium oxide as the material for producing the nontransparent barrier ribs, since the selection of known materials for a known purpose is within the skill of the art.

Reasons for combination in the rejection of claims 1, 7, 8, and 11 apply.

Regarding claim 6, Whang teaches the first barrier rib members are arranged substantially in parallel with and at locations between the address electrodes (A1-A9), and the second barrier rib members are arranged substantially in parallel with and at locations between the discharge sustain electrodes (32+33) (see for example, Figs. 12 and 13).

Regarding claim 9, Whang discloses the discharge cells are arranged in the zigzag manner by arranging the second barrier rib members defining the discharge cells in a first space defined by a first pair of neighboring first rib members such that they are not aligned with the second barrier rib members defining the discharge cells located in a second space defined by a second pair of neighboring first rib members, wherein one rib member of the first pair of neighboring first rib members is also one of the first rib members in the second pair of neighboring first rib members (see Figs. 12 and 13).

Regarding claim 10, Whang teaches a first set of the barrier rib members is formed on a first set of the address electrodes (32+33) and a second set of the barrier rib members is formed on a second set of the address electrodes (A1-A9), wherein the second set of address electrodes

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includes at least one of the address electrodes which is not part of the first set of address electrodes (see Figs. 12 and 13).

Claims 3-5 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amemiya (US 6,583,560) as applied to claims 1 and 8, above, in view of Nishimura et al. (JP 2001-118512).

Regarding claims 3-5 and 12-13, Whang et al., Nakamura, and Horiuchi et al. do not specifically teach one of the sets of barrier rib members higher than the other. However, Nishimura teaches having one set of the barrier rib members higher than the other so as to increase the exhaust efficiency during manufacturing of the PDP (see for example paragraph 0008). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the sets of barrier rib members at different heights so as to increase the exhaust efficiency during manufacturing of the PDP. It is noted that having a particular set higher than the other does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select either set of the barrier rib members to be higher than the other.

Response to Arguments

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony Perry
Patent Examiner
Art Unit 2879
June 26, 2006



JOSEPH WILLIAMS
PRIMARY EXAMINER